X-day test results

Ed Masuoka

7/13/99

Loader/PGE/Database performance

- Very reliable performance for PGEs as shown in tic-tat-toe charts for L2-Daily L3
  - No deadlock problems
  - No PGEs failing due to upstream errors
  - Results were obtained from “perfect” input data
- 8-day Land products are being shaken out now and preliminary results look good

Problem (disk space)

- Running out of disk space
  - We have 1TB online and can run out of space when running large processing like L2g, 8-day land, LST and Ocean PGEs
  - Remaining 2TB of disk space needs to be added
  - Change PGE perl script to delete interim files once they are no longer needed rather than when a PGE ends
  - Fix PGEs to insure that interim files are deleted
  - Document resource profile for each PGE and adjust job mix

Problem (Scheduler hangs)

- Daemons can hang when preparing large job streams for L2g (MDL5) and S-day land (MDL10)
  - Operator intervention required to restart daemons. Less than a minute and not an issue for 7x24 operations.
  - Will estimate level of effort required for V1 patch but currently not planning a Vl fix

Problem (I/O wait)

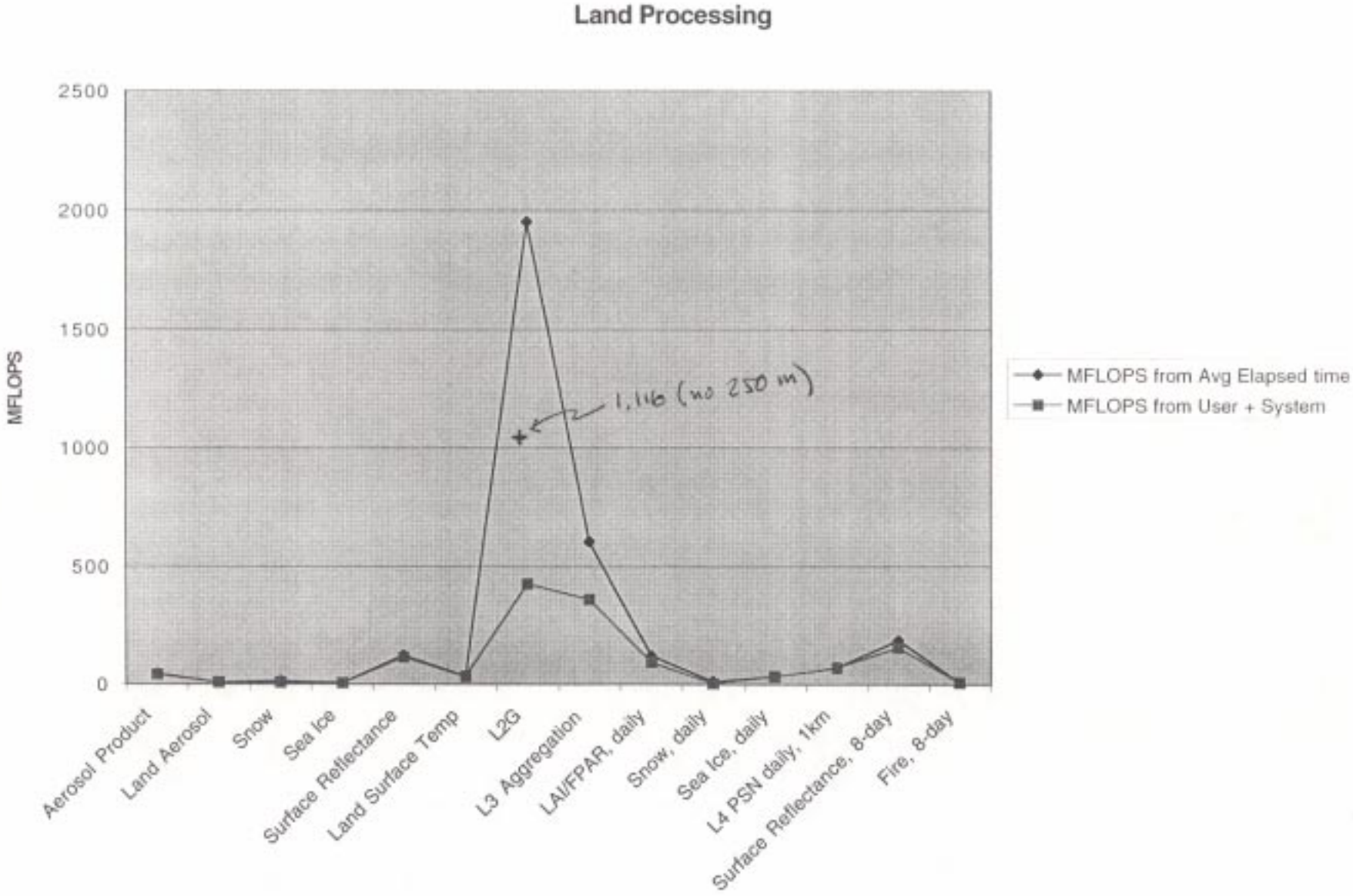
- For some PGEs significant resources are lost waiting for I/O
  - For PGEs with significant I/O wait times we are analyzing their problems and modifying PGEs and perl scripts where this makes a difference
  - We are looking into whether the MODAPS V2 file system can be incorporated into V1 but will probably wait for V2 delivery in early 2000

Land Data Processing Launch+6
100% with 250m
100% w/o 250m
50% with 250m no global
Land MFLOPS through L+6
Baseline MFLOPS
MFLOPS User+System
Cumulative MFLOPS
0
500
1000
1500
2000
2500
3000
3500
4000
4500
Aerosol Product
Land Aerosol
Snow
Sea Ice
Surface Reflectance
land Surface Temp
L2G
L3 Aggregation
LAI/FPAR, daily
Snow, daily
Sea Ice, daily
L4 PSN daily, 1 km
Surface Reflectance, 8-day
land Surface Temp, 8-day
LAI/FPAR, 8-day
Snow, 8-day
Net Primary Productivity, 8 day
Gridded Sea Ice, 8-day
Gridded BRDF/Albedo, 16-day
Gridded VI (250m), 16-day
Gridded VI (1km), 16-day
Gridded Vegetation Indices, Month
Gridded Thermal Anomalies, Month
Gridded Landcover Database, Month
Landcover Change, Month
land Surf. Temp, daily, .5 deg CMG
Snow daily, CMG
Gridded Sea Ice Cover, daily, CMG
MODIS LST .5 CMG, 8DY
Snow Cover, .25 CMG, 8DY
Sea Ice, .25 CMG, 8DY
BRDF/Albedo, .25 CMG, 16DY
Vegetation Indices, .25 CMG, 16DY
Vegetation Indices, .25 CMG, Month
NPP, CMG, .5DEG, Monthly
land Surface Temp.
Leaf Area Index, CMG, Month
BRDF/Albedo, CMG, Month

Product	MFLOPS Baseline	MFLOPS Elapsed time
Cloud Properties	900	489*
Zonal processing	95	47
Daily	8	1
Weekly	N/a	.2
Monthly	.3	.3
	1003 MFLOPS	537 MFLOPS

Atmosphere Benchmarks versus Baseline

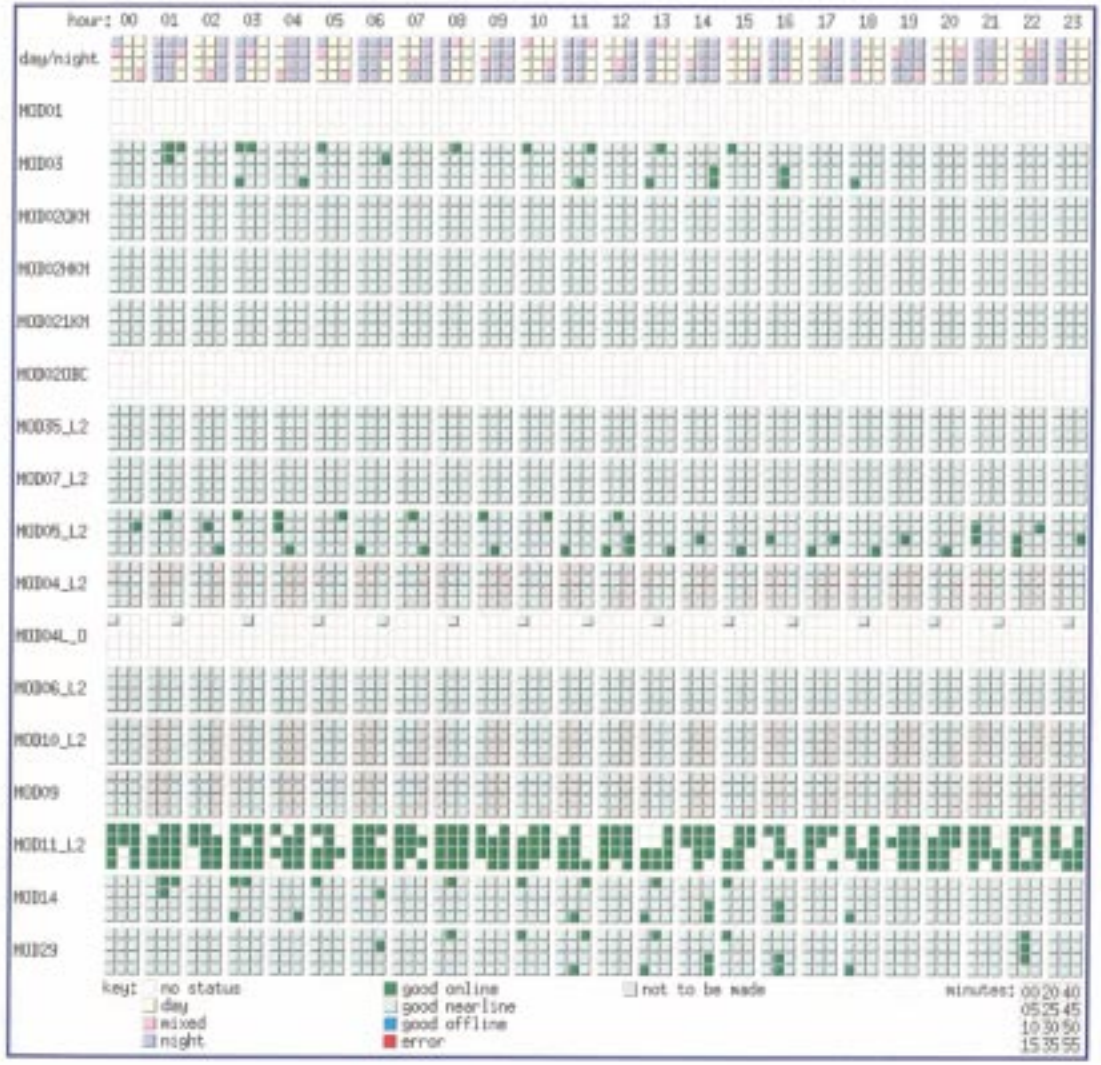
* 2x faster version anticipated


Land Processing
MFLOPS
2500
2000
1500
1000
500
0
1,116 (no 250 m)
MFLOPS from Avg Elapsed time
MFLOPS from User + System
Aerosol Product
Land Aerosol
Snow
Sea Ice
Surface Reflectance
Land Surface Temp
L2G
L3 Aggregation
LAI/FPAR, daily
Snow, daily
Sea Ice, daily
L4 PSN daily, 1km
Surface Reflectance, 8-day
Fire, 8-day

Granule Image for 1997 223

Mon Jul 12 19:01:41 1999

begin - end



For further information contact: mebshelp@ltpmail.gsfc.nasa.gov

Responsible NASA Official: Ed Masuoka
Web Curator: problem@ltpmail.gsfc.nasa.gov

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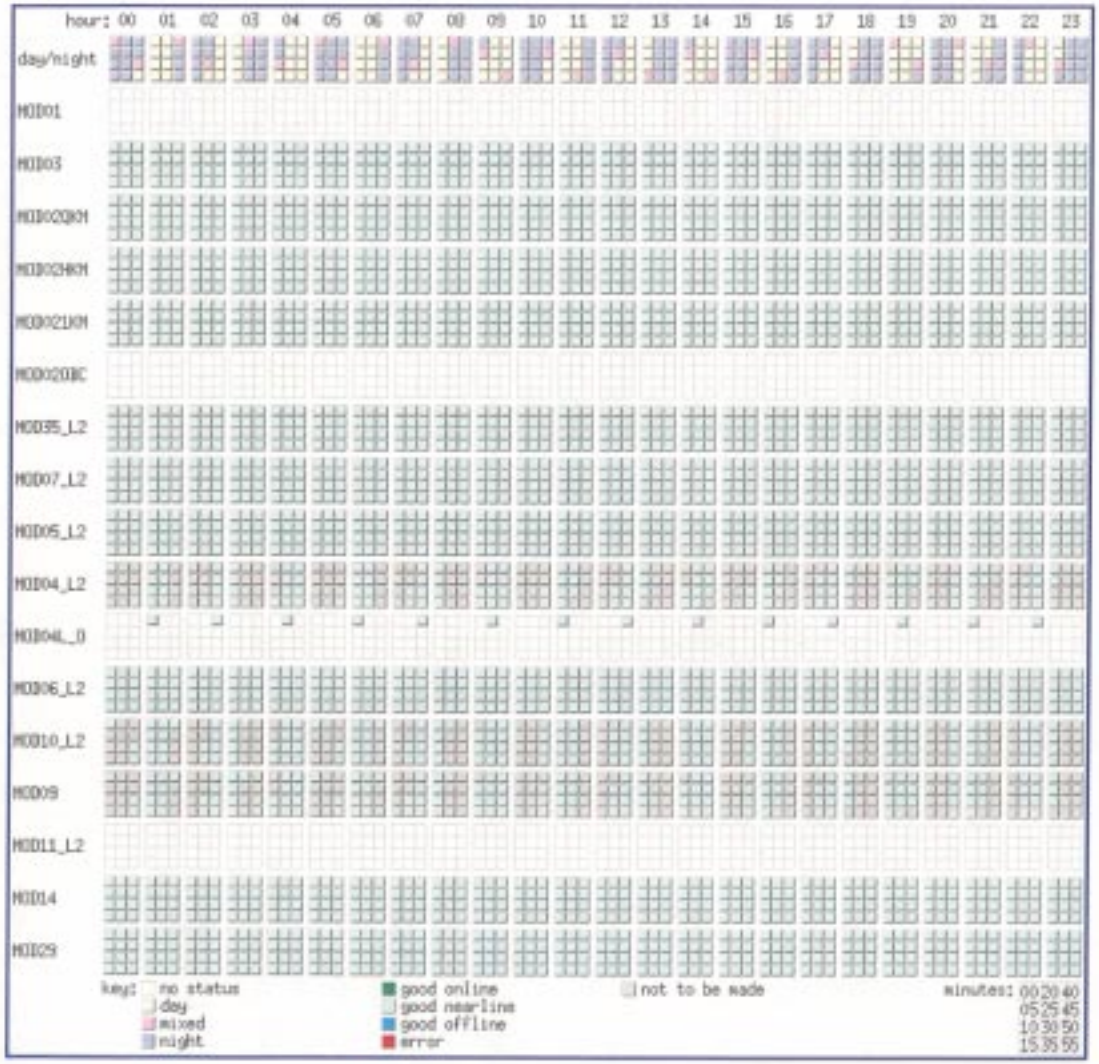
Granule Image for 1997 224

Mon Jul 12 19:02:47 1999

begin - end



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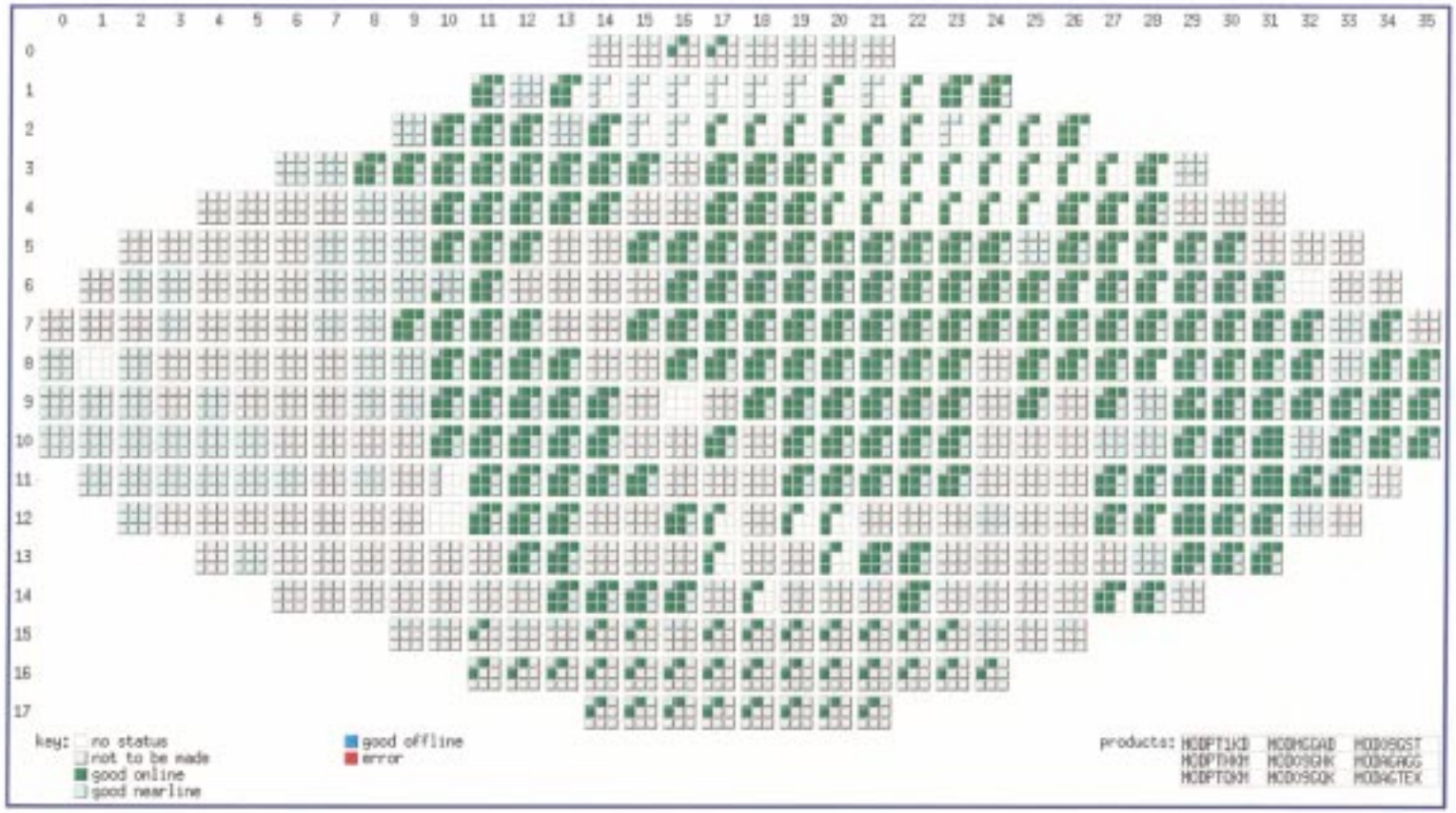
Daily Surface Reflectance for 1997 223

Mon Jul 12 19:03:24 1999

begin - end



Tile Key

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Daily Fire and Cryospheric for 1997 223

Mon Jul 12 19:04:10 1999

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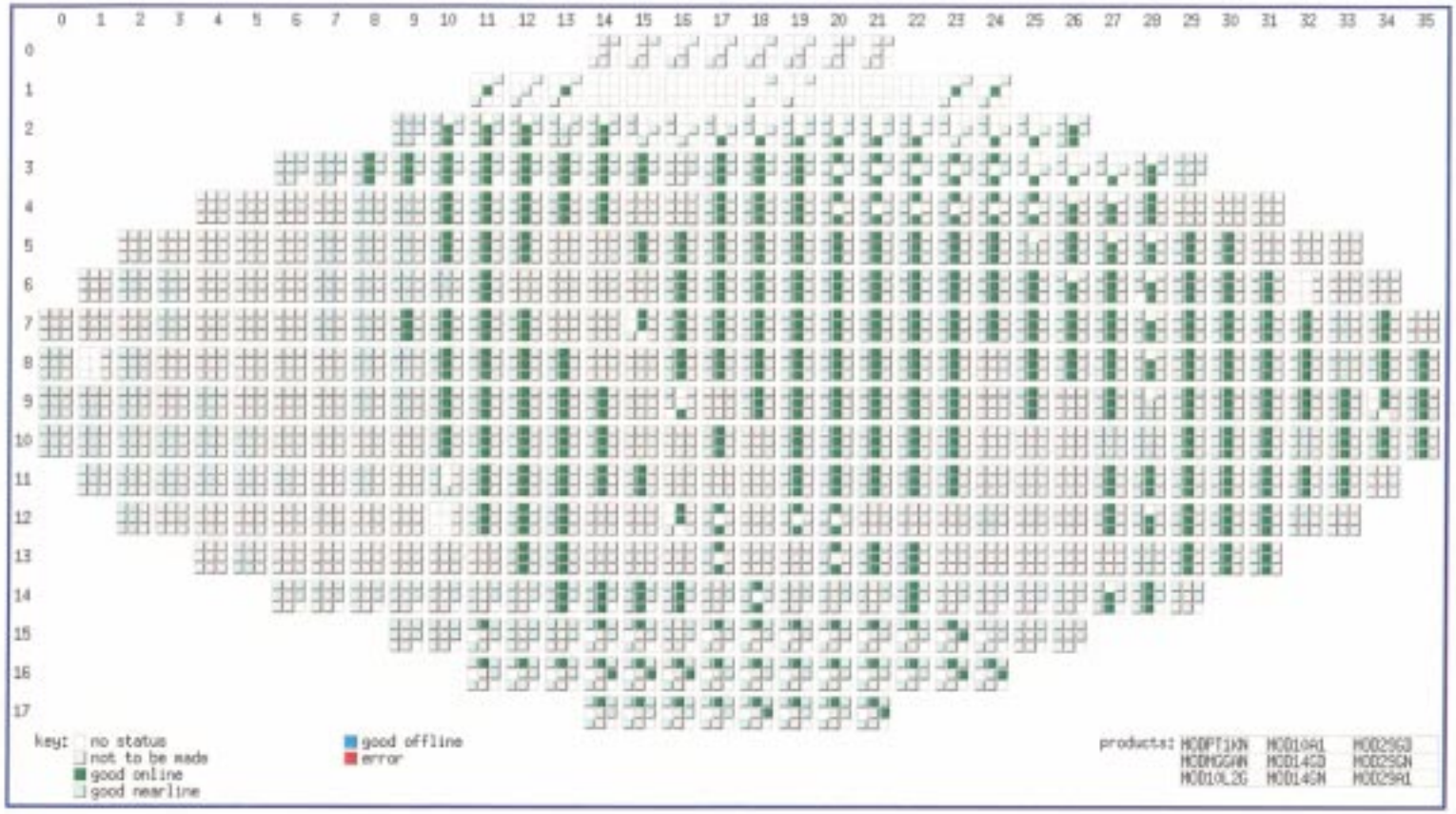
begin - end



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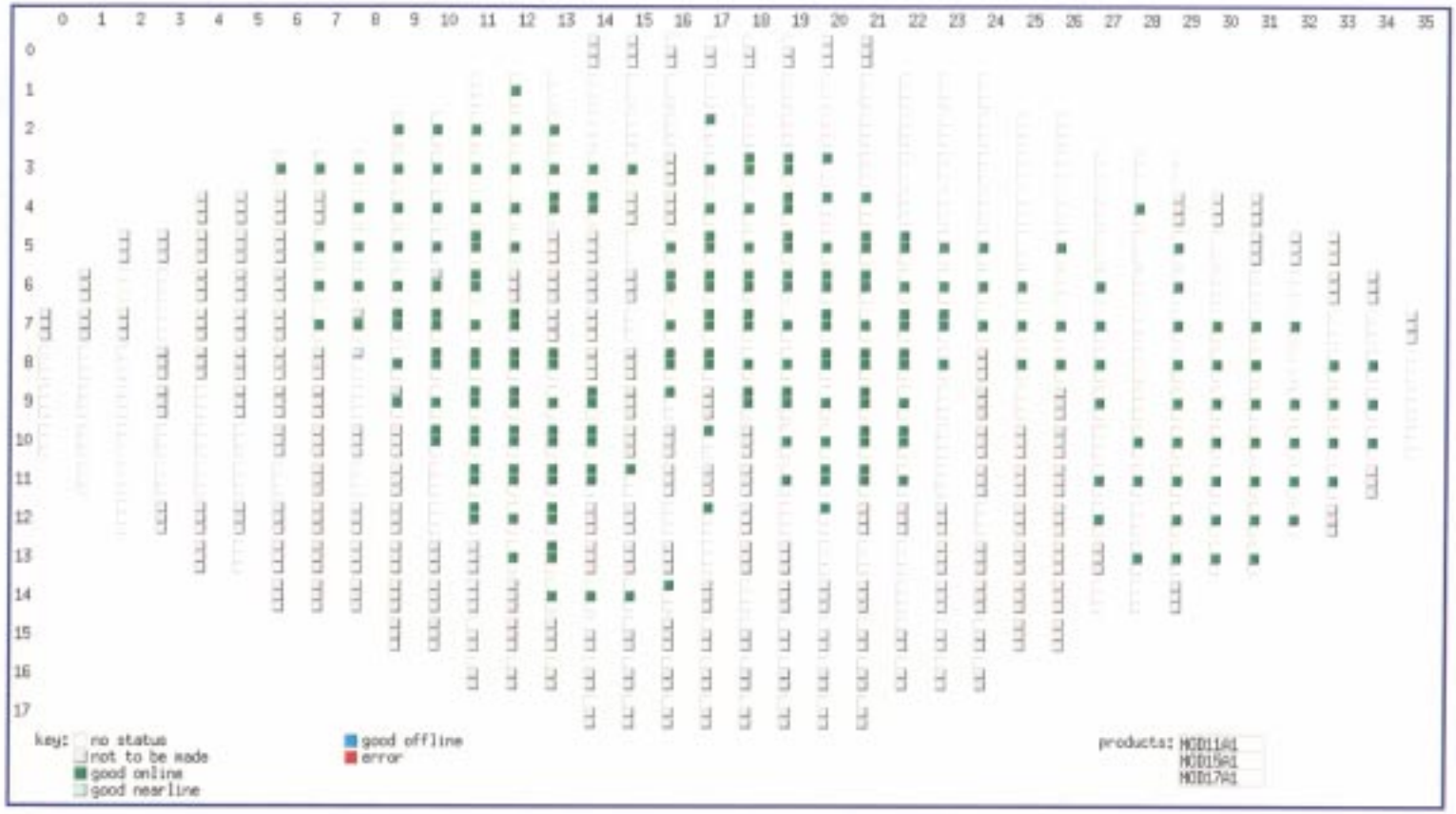
Daily Thermal and Biophysical for 1997 223

Mon Jul 12 19:04:46 1999

begin - end



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